

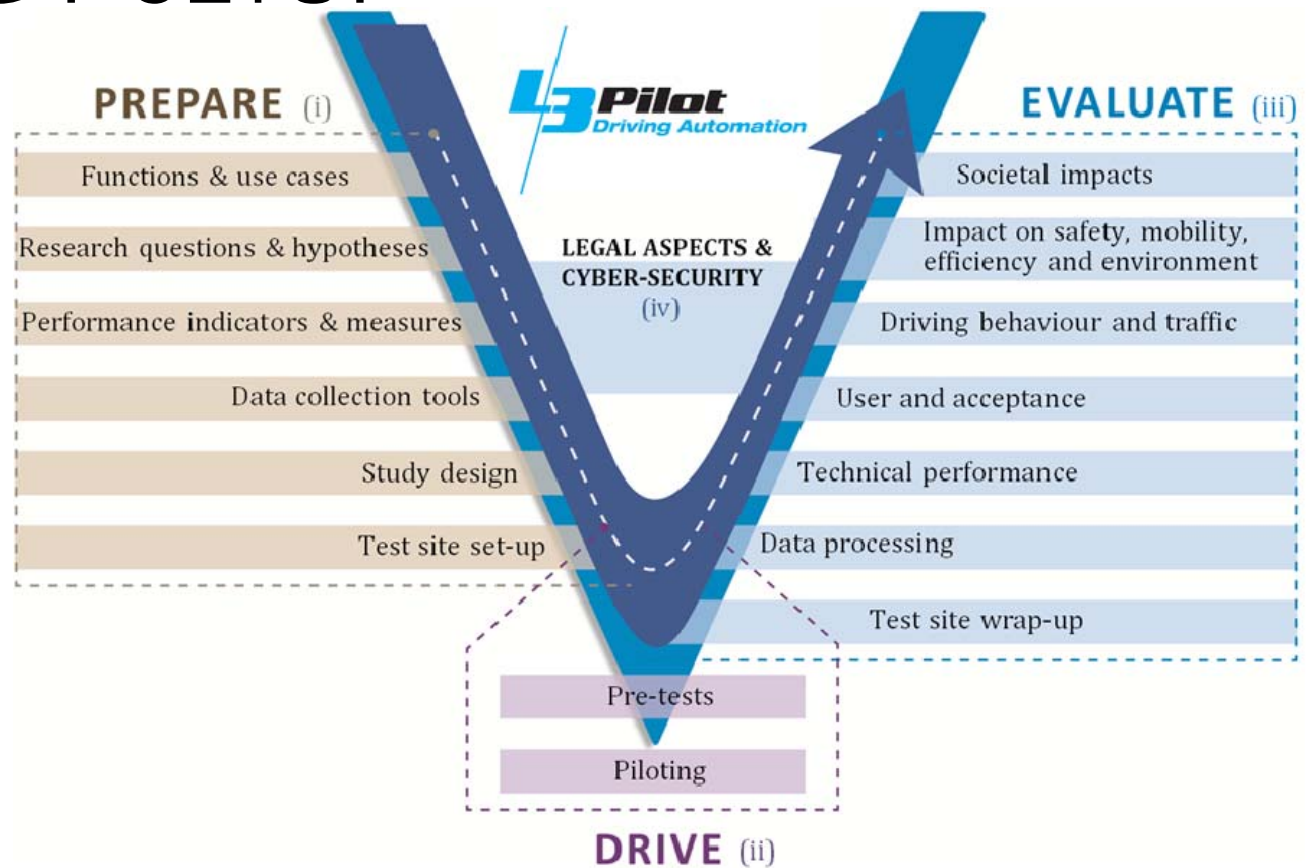
METHODOLOGY FOR PILOTING, TESTING AND EVALUATION OF AUTOMATED DRIVING SYSTEM

Satu Innamaa, VTT



OVERALL OBJECTIVE FOR METHODOLOGY SETUP

To cover the steps in "PREPARE" to lay the foundations for the successful execution of the 'DRIVE' and 'EVALUATE' steps



STEP 1: DEFINE RESEARCH QUESTIONS, HYPOTHESES & LOGGING NEEDS



Theories & mechanisms

Function descriptions



Research questions

Hypotheses

Logging needs

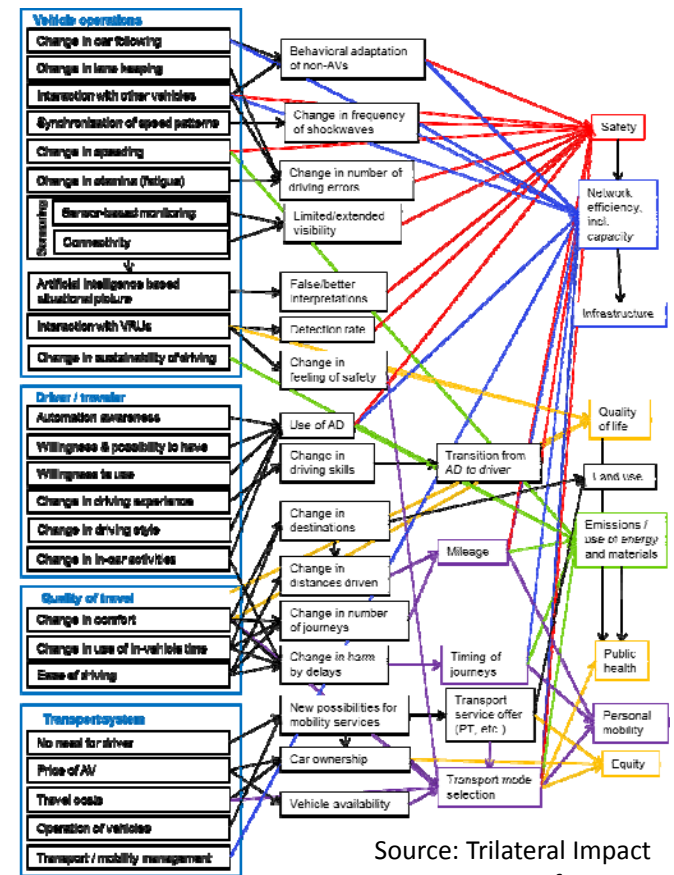


CHALLENGES RELATED TO SELECTION OF THE KEY RESEARCH QUESTIONS

- The impacts of automated driving are complex, far-reaching and include indirect elements, partly still unknown
 - High expectations
 - Pilot study limitations

Challenge: What to include?

Solution: To focus on main impacts feasible to assess (w.r.t. experimental procedures, logging possibilities, evaluation methods)



Source: Trilateral Impact Assessment SG for ART WG

STEP 2: DEFINE EXPERIMENTAL PROCEDURES AND MAKE PLANS HOW TO IMPLEMENT THEM ON THE PILOT SITES



Controlled tests:

- What is allowed?
- By whom?
- Where?
- When?
- In which conditions?
- For how long?
- Etc...

CHALLENGES RELATED TO EXPERIMENTAL PROCEDURES

- Use of prototype vehicles
 - “Safety first”, evaluation needs to adapt to the safety measures of tests
- 11 Pilot sites & some supplementing studies
 - Regulations, company rules, ethics, ...

Challenge: How to come up with common, harmonized field tests that provide the needed input for the evaluation?

Solution: Good collaboration between the methodology team & pilot sites, including visits to all sites

STEP 3: DEFINE RESEARCH METHODS FOR ALL RESEARCH QUESTIONS

- Existing tools
- New tools



CHALLENGES RELATED TO EVALUATION METHODS

- Use of prototype vehicles
 - Not fully mature, controlled tests
 - All field results cannot be used as such in the evaluation
- Scenarios for socio-economic assessment
 - Effect of other, parallel trends

Challenge: How to come up with methods that provide good evidence of the impacts?

Solution: Combine best-practice solutions of evaluation tools & methods, build bridges between them, be transparent where assumptions are needed to overcome the lack of direct evidence

MORE INFORMATION

www.L3Pilot.eu

Deliverables: D3.1-4 (to come)

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